SHUBNIKOV, D. A., CAND BIO SCI, "DYNAMICS OF THE BIOLOGICAL STATE OF THE ATLANTIC-SCANDINAVIAN HERRING IN THE THIS SUMMER." MOSCOW, 1960. (ACAD SCI, USSR, INST OF OCEANOLOGY). (KL, 3-61, 212).

SHUBNIKOV, D.A.

Relation between fatness and the fractionated spawing regime in the herring Clupeonella delicatula (Nordm.) of the Sea of Azov. Nauch. dokl.vys.shkoly; biol.nauki no.2:31-32 '60. (MIRA 13:4)

1. Rekomendovana kafedroy ikhtiologii Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(AZOV, SEA OF--HERRING)

SHUBNIKOV, D.A.

Dynamics of some biological indices of the Atlanto-Scandinavian herring in summer. Trudy sov. Ikht. kom. no.10:73-79 '60.
(MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii (VNIRO).
(Atlantic Ocean--Herring)

SHUBNIKOV, D.A.

Periodicity differences in the life cycle of the Atlantic-Scandinavian herring of various size. Dokl. AN SSSR 134 no.3:735-736 S '60.
(MIRA 13:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii.
(Herring) (Scales (Fishes))

SHUBNIKOV, D.A.

Some characteristics of growth in length in the Atlanto-Scandinavian herring in summer. Trudy sov. Ikht. kom. no.13:393-396 '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii - VNIRO.
(Atlantic Ocean--Herring)
(Growth)

PARAKETSOV, I.A.; SHUBNIKOV, D.A.

Hybrid of the two flatfish species Platessa quadrituberculata (Pall.) and Pleuronectes stellatus (Pall.) from Bristol Bay. Vop. ikht. 1 no.3:395-398 '61. (MIRA 14:11)

1. Laboratoriya ikhtiologii Instituta morfologii zhivotnykh AN SSSR i kafedra ikhtiologii Biologo-pochvennogo fakul'teta Moskovskogo gosudarstvennogo universiteta.
(Bristol Bay--Flatfishes)

SHUBNIKOV, D.A.; SHUBNIKOVA, O.N.

Sea birds and the search for herring. Priroda 50 no.11:108-109 N '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii, Moskva (for Shubnikov).
2. Institut geografii AN SSSR, Moskva (for Shubnikova).
(Herring fisheries) (Sea birds)

SHUBNIKOV, D.A.

Some data on the biology of coalfishes of the Bering Sea. Trudy VNIRO 48:271-279 '63. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii.

SHUBNIKOV, D.A.; LISOVENKO, L.A.

Materials on the biology of rock sole (Lepidopsetta bilineata) in the southeastern part of the Bering Sea. Trudy VNIRO 49: 209-214 '64. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii.

June 1947

USSR/Medicine - Plague
Medicine - Veterinary Medicine

"Plague in Pigs, Where Temperature is Not One of the Symptoms," L. N. Andreyev, I. I. Shubnikov, 3 pp

"Veterinariya" No 5

Experiments were conducted in Mecklenburg. Infection carried from East Prussia. In all cases, in clinical, pathological, and anatomical observations, temperature was absent. Temperature was noticable only in pigs which were at the same time infected with P Suisepticus and P Suipestifer. In many cases temperature was not only normal but subnormal.

PA 17T13

SHUBNIKOV, I. S. (Majors; ANDREEV, M. N. (Majors)
Veterinary Service
"SWine plague of latent temperature forms."
SO: Veterinariia 24(6), 1947, p. 11.

SHUBNIKOV, K. V.

Skorosnoe frezerovanie chuguna. Leningrad, Mashgiz, 1948. 58 p. diagrs.
(Tekhnologiia mashinostroeniia: Stanki i obrabotka metallov rezaniem)

(High-speed milling of cast iron.)

DLC: TJ1230.S58

SO: Manufacturing and Mechanical Engineering in the Soviet Union,
Library of Congress, 1953

SHUBIKOV, K. V.

Shubikov, K. V.

"Errors in Placing Parts on Milling and Boring Machines." Min Higher Education USSR. Leningrad Polytechnic Inst imeni M. I. Kalinin. Leningrad, 1955 (Dissertation for the degree of Candidate in Technical Sciences)

SO: Knizhnaya letopis' No. 27, 2 July 1955

DAVYDOV, Petr Fedorovich; SHUBNIKOV, K.V., kand. tekhn. nauk, red.; FREGER, D.P., red. izd-va: GVIRTS, V.L., tekhn. red.

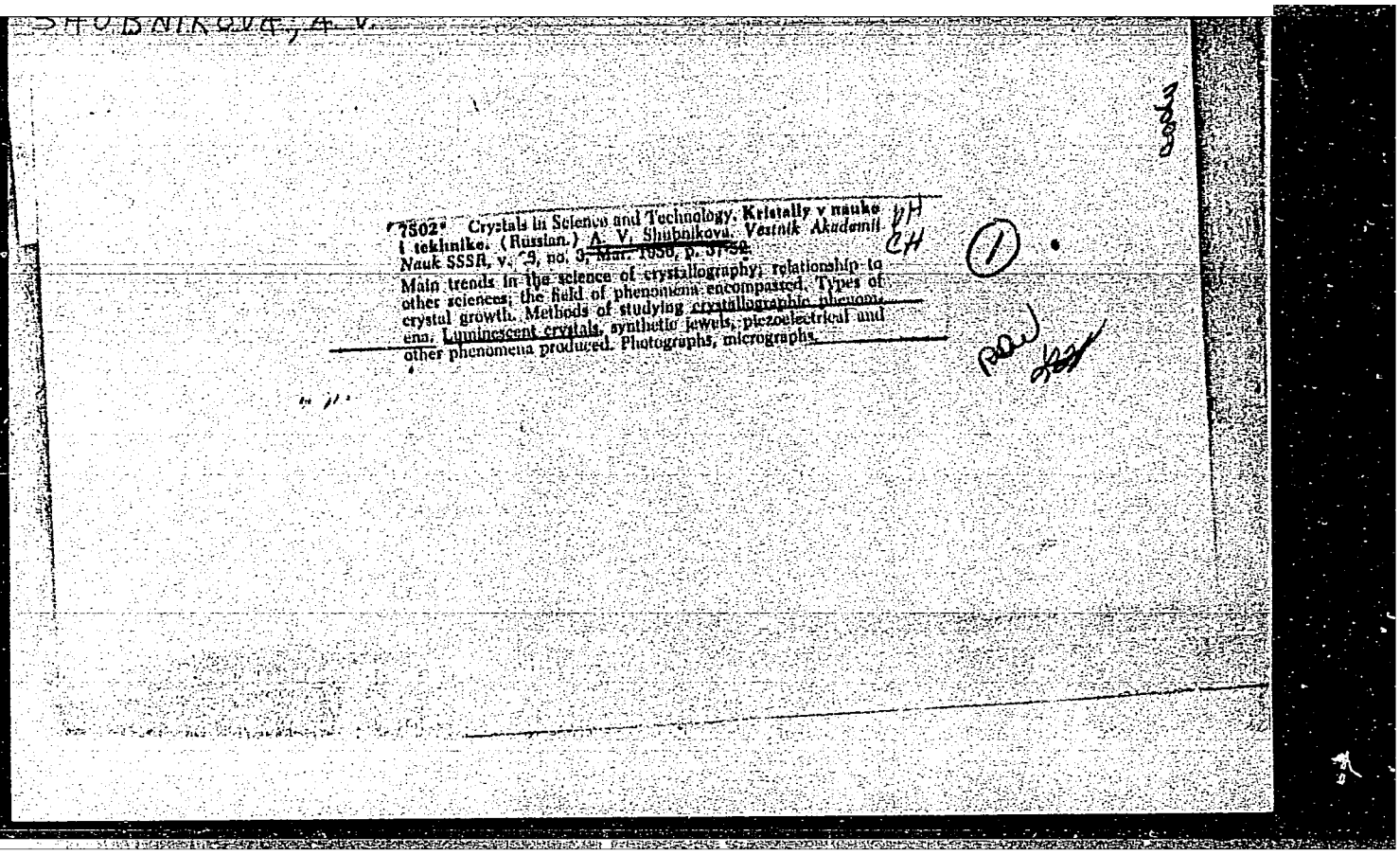
[Tools and devices used by mechanics] Instrument i prisposobleniia, primeniaemye slesariami; obzor. Leningrad, Leningr. dom nauchno-tekhn. propagandy, 1962. 52 p. (MIRA 15:9)
(Machinists' tools)

SHUBNIKOV, M. G.

Dept. Disinfestation, Central Sci. Research Inst. for Disinfection, People's Commisariat for Public Health, NKZDRAVA, (-19hh-).

"The fir-oil as an insecticide,"

Zhur. Mikrobiol., Epidemiol., i Immunobiol., No. 3, 19hh



7502. Crystals in Science and Technology. Kristally v nauke i tekhnike. (Russian.) A. V. Shubnikova. Vestnik Akademii Nauk SSSR, v. 23, no. 3, Mar. 1953, p. 37-58.

Main trends in the science of crystallography; relationship to other sciences; the field of phenomena encompassed. Types of crystal growth. Methods of studying crystallographic phenomena. Luminescent crystals, synthetic jewels, piezoelectrical and other phenomena produced. Photographs, micrographs.

FEOKTISTOV, A.T., inzh.; SHUBNIKOVA, M.F., inzh.

For perfect organization of underground transportation in mines. Bezop.truda v prom. 7 no.1:19-20 Ja '63. (MIRA 16:2)

1. Gosudarstvennyy komitet pri Sovete Ministrov RSFSR po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru. (Mine haulage)

SHUBNIKOVA, O.N.; MOROZOV, Yu.V.

Some ornithological observations in central Yakutia. Biul. MOIP. Otd.biol. 64 no.5:142-144 S-O '59. (MIRA 13:6)
(YAKUTIA--BIRDS)

N.

SHUBNIKOVA, O.M.; MOROZOV, Yu.V.

Some geographical peculiarities in the nesting habits of birds in central Yakutia. Biul. MOIP. Otd. biol. 66 no.1:129-132 Ja-F '61. (MIRA 14:3)

(YAKUTIA--BIRDS--EGGS AND NESTS)

SHUBNIKOV, D.A.; SHUBNIKOVA, O.N.

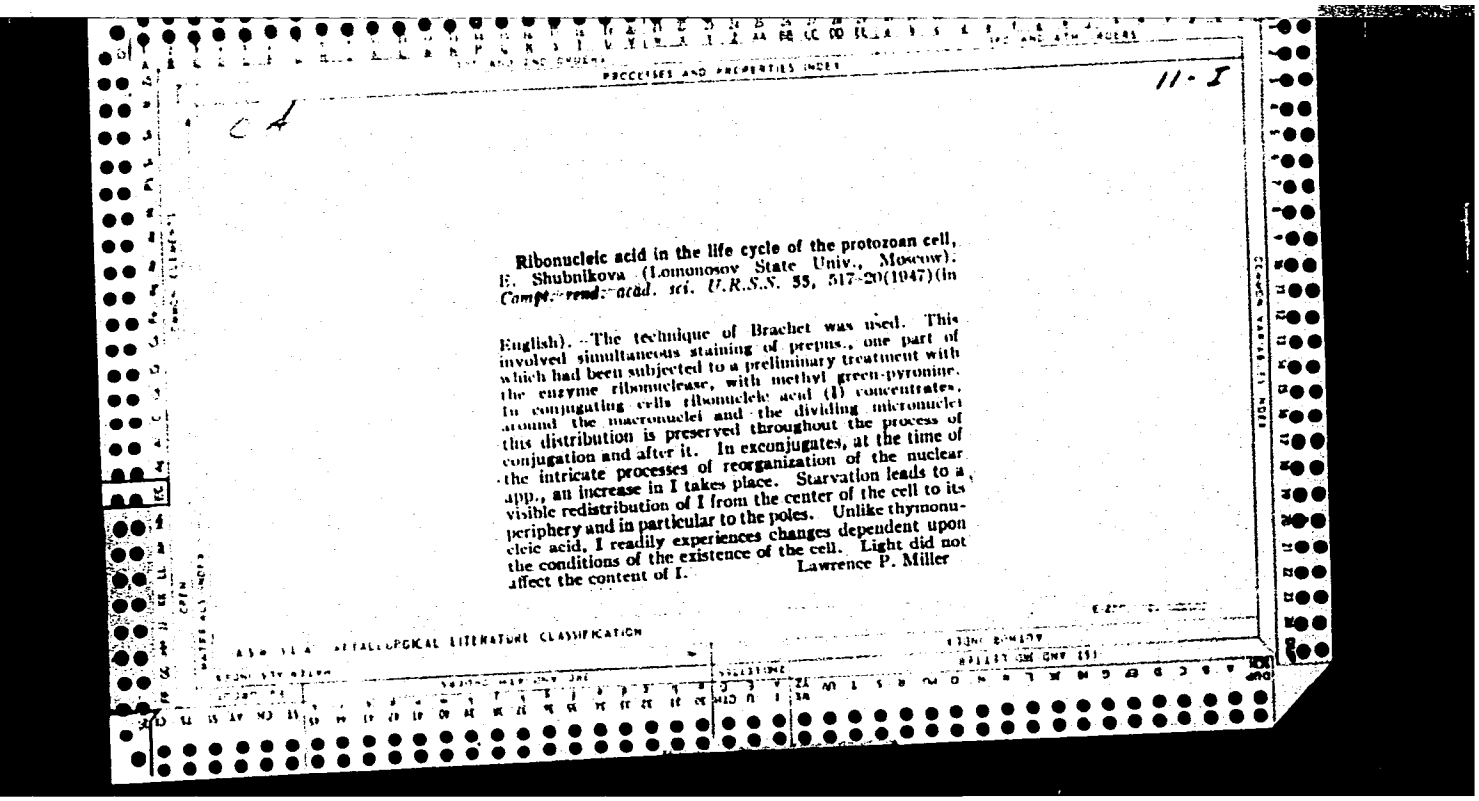
Sea birds and the search for herring. Priroda 50 no.11:108-109 N '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii, Moskva (for Shubnikov).
2. Institut geografii AN SSSR, Moskva (for Shubnikova).
(Herring fisheries) (Sea birds)

SH[illegible]VA, E. (Moscow)

"[illegible]" (p.440) by Shubnikova, E.

SO: Advances in Modern Biology (Uspekhi Sovr menno i Biologii) Vol. XXI, No. 1, 1946



Ribonucleic acid in the life cycle of the protozoan cell, E. Shubnikova (Lomonosov State Univ., Moscow). *Compt. rend. acad. sci. U.R.S.S.* 55, 517-20(1947)(in English).—The technique of Brachet was used. This involved simultaneous staining of preps., one part of which had been subjected to a preliminary treatment with the enzyme ribonuclease, with methyl green-pyronine. In conjugating cells ribonucleic acid (I) concentrates around the macronuclei and the dividing micronuclei this distribution is preserved throughout the process of conjugation and after it. In exconjugates, at the time of the intricate processes of reorganization of the nuclear app., an increase in I takes place. Starvation leads to a visible redistribution of I from the center of the cell to its periphery and in particular to the poles. Unlike thymonucleic acid, I readily experiences changes dependent upon the conditions of the existence of the cell. Light did not affect the content of I.

Lawrence P. Miller

SHUBNIKOVA, Ye. A.

SHUBNIKOVA, Ye. A. -- "Cytological and Histochemical Investigation of the Silk-Producing Glands of the Chinese Oak Silkworm." Sub 19 Dec 52, Moscow Order of Lenin State U imeni M. V. Lomonosov. (Dissertation for the Degree of Candidate in Biological Sciences).

SO: Vechernaya Moskva January-December 1952

SHUBNIKOVA, Ye.A.

Priority of Russian scientists in the discovery of indirect cellular fission. Trudy Inst.ist.est. 4:373-380 '52. (MLRA 6:7)
(Karyokinesis)

SHUBNIKOVA, E.A.

MD

Histochemistry of nucleic acids in the process of growth and functioning of silk-excreting glands of the China-oak silkworm. E. A. Shubnikova and A. B. Gintsburg. *Arkhiv Anat. Histol. i Embryol.* 31, No. 1, 56–64(1954); *Referat. Zhur., Khim.* 1954, No. 41284.—By making use of histochem. methods it has been found that the amts. of ribonucleic acid (RNA) in cytoplasm and deoxyribonucleic acid (DNA) in the nuclei increase during the process of development of silk-excreting glands. The synthesis of the secretion inside the nuclei is accompanied by an increased utilization of DNA. For the synthesis of the secretion in the cytoplasm RNA is required; an accumulation of RNA in cytoplasm occurs before the excretion and during the first hrs. of the activity of the silk-excreting glands. It seems that there is an interrelation between RNA and DNA during the growth and the physiol. activity of the silk-excreting glands.
B. Wierbicki

(1)

Chair of Histology, Moscow State U.

SHUBNIKOVA, E. A.

8704. Rôle of the nucleus in the process of secretion. E. A. Shubnikova. *Usp. sovrem. Biol.*, 1954, 38, 58—67; *Referat. Zh. Biol. Khim.*, 1958, Abstr. No. 13714.—The form and composition (content of DNA, RNA, glycogen, arginine, histidine, tyrosine) of the nucleus in the silk-secreting cells of caterpillars of the Chinese oak silkworm at the 1st., 2nd and 5th growth stages were studied during the formation of the secretion and accumulation of its precursors. In larvae of the 5th growth stage in the periods of active elaboration of the secretion and spinning of the cocoon the cell nuclei increase in size, change from a bean shape to branching form, lose their nuclear membrane, and show a number of nucleoli. The DNA content of the nucleus and RNA content of nuclei and nucleoli increase. Histidine and arginine also increase, and become concentrated in the apical part of the nucleus. A substance of unknown nature appears in the nucleus: it gives a positive Schiff's reaction and thus contains free aldehyde groups. Morphologically, intranuclear oxyphil accumulations of prosecretion containing tyrosine are observed. There is a release from the nucleus of strands of chromatin from the nucleoli, and of drops of prosecretion. As the extrusion of the secretion proceeds and the cells become exhausted, the nuclei return to the structure and chemical composition of nuclei of larvae in the first growth stage. (Russian)

T. R. Parsons

SHUBNIKOVA, Ye.A. (Moskva, G-2, Arbat, d.49, kv.5)

Structure and histology of yolk cells of Antherea pernyi silkworm [with summary in English]. Arkh.anat.gist. i embr. 34 no.3:67-73 My-Je '57. (MLRA 10:10)

1. Iz kafedry gistologii (zav. - prof. A.N.Studitskiy) Moskovskogo gosudarstvennogo universiteta.

(FOOD
yolk balls of Chinese oak bombyx, structure & histol.
(Aus))
(PLANTS
same)

EXCERPTA MEDICA Sec 9 Vol 13/11 Surgery Nov 59

6572. REGENERATION OF MAMMARY GLANDS FROM MINCED GLANDULAR TISSUE (Russian text) - Shubnikova E. A. Moscow State Univ., Moscow - IZV. AKAD. NAUK SSSR (Ser. Biol.) 1958, 6 (735-743) Illus. 7

One of a rat's mammary glands was extirpated, minced and replaced. The changes in this area were followed up during 2-36 days after transplantation of the minced gland. The replacement resulted in re-development of the glandular tissue. The histological structure of the new mammary gland complies with the physiological status of the organism. Part of the transplanted tissue becomes necrotic; surviving cells resume their normal condition. These cells begin to divide and to form follicles. On the 7-8th day most of the tissue is composed of regularly formed follicles, whereas the necrotic masses are phagocytized and absorbed. On the 12-20th day the gland is histologically completely restored, although the duct system does not develop normally and the nipple is not restored.

SHUBNIKOVA, Yelena Alekseyevna; DANIL'CHENKO, O.P., red.; YERMAKOV, M.S., tekhn. red.

[The secretory cell; lecture 1.] Sekretornaia kletka; lektsiia I. Moskva, Izd-vo Mosk. univ., 1961. 52 p. (MIRA 14:8)
(SECRETION) (CELLS)

ZHUBRIKOVA, Ye.A.; CHUMAKOVA, L.P.

Histochemical changes in submaxillary glands of rats in alloxan diabetes. Probl. endok. i gorm. 10 no.4:89-93 Jl-Ag '64. (MIRA 18:6)

1. Kafedra gistologii i gistologii (zav.- prof. G.I. Roskin [deceased]) Moskovskogo gosudarstvennogo universiteta.

SHUBNIKOVA, Ye.A.; ALTUKHOVA, V.I.

Histochemical changes of the salivary tubules of the submaxillary glands in rats following depancreatization. Probl. endok. i gorm. 11 no.6:96-101 N-D '65. (MIRA 18:12)

1. Kafedra tsitologii i gistologii (zav. - prof. G.I.Roskin [deceased]) Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

SHUBNYY, F., brigadir elektrikov

Brigade works according to new methods. Na stroi.Mosk. 1 no.10: 11-12 O '58. (MIRA 11:12)

1. Stroitel'nyy uchastok No.53 tresta Moselektromontazh No.2. (Moscow--Electric wiring, Interior)

SHUBNYY, Fedor, brigadir; YARTSEV, N., red.; PAVLOVA, S., tekhn. red.

[From laggards to leaders; notes of a brigade leader of electrical installation workers] Iz otstaiushchikh v peredovye; zametki brigadira elektromontazhnikov. Moskva, Mos. rabochii, 1961. 62 p. (MIRA 15:1)

1. Brigadir elektromontazhnikov tresta "Moselektromontazh" no.2 (for Shubnyy).

(Electricians)

S/707/60/003/000/008/013
B125/B102

24.6410

AUTHORS: Dombrovskaya, G. S., Kaipov, D. K., Shubnyy, Yu. K.

TITLE: Luminescence spectrometer for examining γ-spectra of radioactive nuclei

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki. Trudy. v. 3, 1960. Vzaimodeystviye vysokoenergichnykh chastits s atomnymi yadrami, 115-123

TEXT: The luminescence spectrometer consists of a scintillator crystal, a photomultiplier and an electrical apparatus for measuring the distribution of the pulses arising. Fig. 1 shows the block diagram of this amplifier, consisting of outlying block (with crystal, photomultiplier, and cathode repeater, circuit see Fig. 2) and principal block (with amplifier, Fig. 3 and differential analyzer, Fig. 4). The linear amplifier operates according to the cascade diagram with negative feedback, has a pass band of 1 Mc/sec and the amplification factor 100. In the pulse-height analyzer a tube of type Л6 (L6) serves as integral analyzer with variable boundary level and tubes of the types Л8 (L8) and

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Л9 (L9) as discriminator. The circuit $R_{17}C_{51}$ replaces the non-existent anticoincidence cascade. The current for the electronic circuit is supplied via a stabilized rectifier (300 v; 160 ma). The resolving power of the scintillation spectrometer is very dependent on the quality of the multiplier and its mode of operation. The fluctuation of the amplification factor of the multiplier is affected substantially by the amplification factor of the first cascade. Most of the ФЭУ-29 (FEU-29) type multipliers investigated exhibit the satisfactory resolving power of 22-26 %. NaI(Tl) and CsI(Tl) crystals set in aluminum were used. Using CsI(Tl) crystals, the resolving power for Hg^{203} and Zn^{65} amounts to 27 and 12 %, respectively and to 24 and 10 %, respectively if NaI(Tl) crystals are used. Owing to its satisfactory properties, the γ-spectrometer described in the present paper can be used successfully in nuclear spectroscopy. Further studies of interaction of γ-radiation with matter and of short-lived isotopes by the method of delayed coincidences are planned by the authors. V. Kim is thanked for adjusting the electronic circuit and for recording the spectra. There are 15 figures and 8 references: 4 Soviet and 4 non-Soviet. The four references to English-language publications read as

follows: R. Cook, Amer. Scient., 45, 3, 245, 1957; R. E. Connaly, Analyt. Chemistry, 28, 12, 1847, 1956; W. Bernard and R. Linden, Nucl., 11, 9, 1953; R. E. Connaly and M. B. Lebout, Analyt. Chemistry, 25, 7, 1095, 1953.

Legend to Fig. 1: Luminescence spectrometer block diagram: (1) scintillator, (2) photomultiplier, (3) linear amplifier, (4) pulse-height analyzer, (5) counting device.

Legend to Fig. 2: Outlying block diagram [Abstracter's note: Owing to their large number the single control elements of the Figs. 2, 3, and 4 cannot be indicated].

Legend to Fig. 3: Linear amplifier circuit

Legend to Fig. 4: Circuit of the single-channel differential pulse-height analyzer

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Luminescence spectrometer for...

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B125/B102

(For figures see Cards 5/6 and 6/6)

4

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S/031/60/000/012/003/003
A161/033

24.6720(1482, 1138, 1158)

AUTHORS: Akkerman, A.F.; Kaipov, D.K.; Shubnyy, Yu.K.

TITLE: Resonance Scattering of γ-Rays on Ni^{60}

PDRIODICAL: Vestnik Akademii nauk Kazakhskoy SSR, 1960, No. 12, pp. 36 - 44

TEXT: The lifetime and spin of the first excitation state of Ni^{60} have been measured using the γ-rays resonance scattering method. The measuring results are given and the ways are indicated to raise the accuracy of the resonance scattering cross section determination, as well as for the possible study of beta decay. The increase of incident γ-rays energy to resonance energy was achieved by utilizing the nuclear recoil in preciding beta decay and gamma radiation. The Co^{60} decay system is considered (Fig. 1) and the energy of emitted γ_2 quantum calculated by the formula $E + E_o - \frac{E_o^2}{2Mc^2} + E_o \frac{V}{c} \cos\theta + E_o \frac{V_\gamma}{c}$ $\cos\alpha + E_o \frac{V_z}{c}$ (3) where V - is recoil nucleus velocity from β-radiation, directed at θ angle to the escape direction of the γ_2 - quantum; V - the velocity of the recoil nucleus from γ_1 - quantum; V_z - the projection of thermal motion velocity on the γ_2 direction;

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S/031/60/000/012/003/003
A161/A033

Resonance Scattering of γ-Rays on Ni^{60}

α - the angle between the escape directions of γ_1 and γ_2 quanta. (The thermal motion effect is not taken into account in the further calculations). Considering that the deceleration time in gases at atmospheric pressure is of the order 10^{-10} - 10^{-9} sec, the relation between the excited level lifetime τ_γ and the resonance scattering cross section σ_{cp} is determined by the formula $\tau_\gamma = \frac{2J^* + 1}{2J_o + 1} \cdot \frac{2.53}{E_o^2 \cdot \sigma_{cp}} \cdot \frac{N(E_p)}{N}$, where $\frac{N(E_p)}{N}$ is the γ-quanta fraction in the incident beam in the 1 ev range at energy $E = E_{res}$ that is determined from the "microspectrum" of the incident radiation; σ_{cp} - the resonance scattering cross section; J_o - normal state spin of nucleus; J^* - excited state spin. The scintillation spectrometer used for γ- quanta recording is illustrated (Fig. 4). The source was $CoCl_2$ of 2mCu activity. The ampule with dryed $CoCl_2$ was evacuated to 10^{-2} mm Hg, sealed and placed into a steel container which was heated to 1050°C, so that all $CoCl_2$ turned into gas. A lead block 70 mm in diameter and 200 mm length protected the detector from direct hits of γ-quanta, and it recorded quanta scattered from a round nickel scatterer; γ-radiation was detected by a NaI (Tl) crystal of 30 mm diameter and 40 mm height, connected to an ФЭУ-29 (FEU-29). The lifetime calculated with the formula (5) for 1330 kev level for Ni^{60} was $\tau_\gamma = (1.24 \pm 0.28) \cdot 10^{-12}$ sec, or about 5 times shorter of single-particle transi-

84970

S/056/60/039/003/056/058/XX
B006/B070

24.6100

AUTHORS: Kaipov, D. K., Shubnyy, Yu. K.

TITLE: The Effect of Collisions of Recoil Nuclei Upon the Resonance Scattering Cross Section of Gamma Rays by Ni^{60} Nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 3(9), pp. 888 - 889

TEXT: In the present "Letter to the Editor", the authors report on their investigations of the resonance scattering of 1330-kev gamma rays by Ni^{60} nuclei with gaseous and liquid Co^{60} sources (in the form of $CoCl_2$). In an earlier paper (Ref.3), the authors had obtained a value of $(17.1\pm3).10^{-27}cm^2$ for the resonance scattering cross section. This cross section is very sensitive to the source medium density and the lifetime τ_γ of the level investigated. In a hydrochloric acid solution of $CoCl_2$ (~ 40 millicuries), τ_γ was found to be $(1.14 \pm 0.37).10^{-12}$ sec, which

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84970

The Effect of Collisions of Recoil Nuclei Upon the Resonance Scattering Cross Section of Gamma Rays by Ni^{60} Nuclei

S/056/60/039/003/056/058/XX
B006/B070

agrees well with the results of other authors. The resonance scattering cross section for the liquid source was found to be $(1.73 \pm 0.2) \cdot 10^{-27} cm^2$. There exists a relation $\bar{\sigma} = (1/2\tau_\gamma)\sigma_0 \pi h P(E_p)$, between τ_γ and the mean resonance scattering cross section $\bar{\sigma}$, $P(E_p)$ being the energy distribution of the γ quanta. The slowing down of the recoil nuclei is taken into account by introducing the factor $1-\exp(-l/v\tau_\gamma)$ into this relation, where v is the velocity of the recoil nucleus and l the path length of this nucleus before collision. For a gaseous source, the factor is practically equal to one. With this, the ratio of the average resonance scattering cross sections for the gaseous source ($\bar{\sigma}_1$) and the liquid source ($\bar{\sigma}_2$) is found to be $\bar{\sigma}_1/\bar{\sigma}_2 = \left[1 - \exp(-l/v\tau_\gamma)\right]^{-1}$. With $\tau_\gamma = (1.1 \pm 0.1) \cdot 10^{-12}$ sec and $v = 7.2 \cdot 10^5$ cm/sec, $l = 8 \cdot 10^{-8}$ cm since $\bar{\sigma}_1/\bar{\sigma}_2 = 9.9$. The authors thank O. Suvarov for participation in the

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33108
S/638/61/001/000/034/056
B116/B102

21.6001

AUTHORS: Dombrovskaya, G. S., Kaipov, D. K., Shubnyy, Yu. K.

TITLE: Resolution of a scintillation spectrometer

SOURCE: Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu atomnoy energii. Tashkent, 1959. Trudy. v. 1. Tashkent, 1961, 229-236

TEXT: A study has been made of the effect of the individual processes occurring in the detector on the resolution of a scintillation spectrometer, of the relationship between these processes, and of the influence of the mode of operation on the resolution. It has been assumed that the statistical fluctuations of the pulse heights at the output of the detector (crystal + photomultiplier) are chiefly due to the fluctuation of the number of photons emitted from the device, and to the fluctuation of the number of electrons emitted from the photocathode of the photomultiplier. In addition, it has been assumed that the statistical processes taking place in the crystal and in the photomultiplier are independent of one another. The resolution of the detector is destined by the halfwidth

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[illegible] was selected

[illegible]photocathode of the photomultiplier

Resolution of a scintillation ...

and irradiating it with γ-quanta of Zn^{65} (E_γ = 1.12 Mev). Subsequently, the largest amplitude was measured, the crystal removed, and the photocathode illuminated with light pulses. The generator pulses had the same duration and frequency as the pulses used for the photomultiplier with the CsI(Tl) crystal and the Zn^{65} source. It is shown that the resolution is influenced chiefly by the number of photoelectrons reaching the first dynode, and that optimum conditions exist for an effective collection of photoelectrons from the cathode. The highest pulse amplitude and the best resolution (6-16%) were observed in the range of 20-30 v. At high supply voltages, this range is a little smaller. The resolution is only slightly improved by an increase in voltage (1% at most). A change in potential between successive dynodes affects the resolution less than a change in potential between the cathode and the shutter. The new technique allows the resolution of the photomultiplier to be determined without any difficulty. The most important requirement for high resolution is an effective focusing. There are 9 figures, 3 tables, and 8 references: 4 Soviet and 4 non-Soviet. The four references to English-language publications read as follows: Borkovsky, G., Clark, R. Rev. Sci. Instr., 24, 1046, 1953; Kiehn, R., Goodman, C. Phys. Rev., 95, 989, 1954; Kelley, G.

Card 3/4

33108
S/638/61/001/000/034/056
B116/B102

Resolution of a scintillation ...

G., Bell, P. R. and others. Nucleonics, 14, 53, 1956; Godlooe, T. F., Nadev, W. G. Rev. of Sci. Instr., 25, 1, 1954.

ASSOCIATION: Institut yadernoy fiziki AN KazSSR (Institute of Nuclear Physics AS Kazakhskaya SSR)

Card 4/4

AKKERMAN, A.F.; KAIPOV, D.K.; SHUBNYY, Yu.K.

Resonant scattering of gamma rays on Te^{124} nuclei. Zhur. eksp. i teor. fiz. 40 no.4:1031-1032 Ap '61. (MIRA 14:7)

1. Institut yadernoy fiziki AN Kazakhskoy SSR.
(Gamma rays--Scattering) (Tellurium--Isotopes)

S/056/62/043/003/011/063
B125/B102

AUTHORS: Kaipov, D. K., Shubnyy, Yu. K., Begzhanov, R. B., Islamov, A. A.

TITLE: Resonance scattering of γ-quanta from Sn^{116} nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 808-812

TEXT: The method of resonance scattering was applied to 1290-kev γ quanta from the Sn^{116} nuclei of a gaseous $In^{116m}Cl_3$ source (Fig. 1) to determine the lifetime of the first excited 1.29-Mev level. A similar value is obtained by the method of Coulomb excitation. The $InCl_3$ produced from enriched metallic indium was sublimated into a quartz ampoule, which was then evacuated and subjected for 1 hr to the thermal neutron flux ($\sim 10^{13}$) of a BBP-C (VVR-S) reactor. Following this it was heated to 500-550°C for 1 to 2 hrs so that $InCl_3$ sublimed ($\sim$0.7 atm). The γ-quantum scattering was measured by two symmetrically arranged scintillation

Card 1/#3

Resonance scattering of ...

spectrometers (Fig. 1). The time dependence of the counting rate was determined by using first a solid source and then a heated gaseous source in 28 series of measurements. With cold sources the increase in the counting rate with time is approximately exponential and with gaseous sources almost exactly so. Owing to the resonance effect the transition of $InCl_3$ into the gaseous state creates a peak at 1.29 Mev in the scattered radiation spectrum. Allowing for the self-absorption of the γ-quanta in the scatterer and their angular distribution the mean value $\bar{\sigma}$ of the resonance cross section is $\bar{\sigma} = (5.31 \pm 0.50) \cdot 10^{-26}$ cm^2. No $\beta\gamma$ and no $\gamma\gamma$ correlations are assumed in the cascade, and the free In^{116m} atom is repelled. Taking account of all cascades $N(E_p) = 0.0127$ ev^{-1} follows for the microspectrum. From this value, and from the experimentally determined value of $\bar{\sigma}$, the lifetime of the 1.29-Mev level is $\tau_\gamma = (1.8 \pm 0.27) \cdot 10^{-12}$ sec (transition $2^+ \rightarrow 0^+$). For the same lifetime the method of self-absorption gives $\tau_\gamma = (6.4 \pm 2.7) \cdot 10^{-13}$ sec. This value agrees with that obtained from the Coulomb excitations. The considerable divergence between the lifetimes found by the two methods

Resonance scattering of ...

is due to the effect of the chemical bonds in the molecule on the energy distribution of the γ-quanta. The E2-transition with E_γ = 1290 kev (solid source) is an accelerated transition with the acceleration factor 10.5. There are 5 figures.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics of the Academy of Sciences Kazakhskaya SSR). Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Institute of Nuclear Physics of the Academy of Sciences Uzbekskaya SSR)

SUBMITTED: April 19, 1962

Fig. 1. Schematic drawing of the experimental arrangement.
Legend to Fig. 1: (1) source; (2) electric furnace; (3), (4) Sn and Cd absorber (in experiments with self-absorption); (5) lead cone; (6), (9) Sn and Cd scatterer; (7) NaJ (Tl) crystal, (8) photomultiplier.

Card 3/3

S/056/63/044/001/026/067
B104/B144

AUTHORS: Begzhanov, R. B., Islamov, A. A., Kaipov, D. K., Shubnyy, Yu. K.

TITLE: Lifetime of the 0.845 Mev level of the Fe^{56} nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 1, 1963, 137-141

TEXT: Resonance scattering of γ-quanta on the 0.845 Mev level of Fe^{56} is investigated using a ring and a plane scatterer and a self-absorption method with a gaseous $MnCl_2$ source ($T_{1/2}$ of Mn^{56} being 2.56 hrs). To determine the lifetime the mean cross section of resonance scattering was measured, and the energy distribution of the γ-quanta emitted was calculated theoretically. The annular Fe scatterer was of 37.5 cm in diameter, 13.5 cm high and 0.9 cm thick. The plane scatterer was a plate (30·30·1 cm), the mean scattering angle was 104°. The plane scatterer gave better screening of the source than the ring scatterer, and this considerably reduced the non-resonance scattering in the energy range of 0.785-0.955 Mev. To reduce the effect of Compton quanta, the

Card 1/2

L 13624-63 EWT(m)/BDS AFFTC/ASD

ACCESSION NR: AP3003102 S/0056/63/044/006/1811/1817

AUTHOR: Kaipov, D. K.; Begzhanov, R. B.; Kuz'minov, A. V.; Shubny*y, Yu. K.

TITLE: Resonance scattering of Gamma quanta on Cu-65 and Ti-46

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1811-1817

TOPIC TAGS: excited state lifetime, nuclear resonance scattering, copper-65, titanium-46

ABSTRACT: The lifetimes of the excited states of Cu-65 and Ti-46 nuclei, at 1.114 and 0.890 MeV, respectively, were measured by nuclear resonance scattering, using gaseous sources of Ni-65 and Sc-46 in NiCl sub 2 and ScCl sub 3. The NiCl sub 2 was prepared from nickel enriched to 77.8% Ni-69 and irradiated in a neutron flux of 1.8 times 10 sup 13 per sq. cm. sec in the reactor of the Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, AN UzSSSR).

The Ni-65 and Sc-46 activities were approximately 20 millicurie. The scattered photons were detected with a NaJ(Tl) crystal combined with a photomultiplier. The energy distributions of the photons were calculated from the Ni-65 and Sc-46 decay schemes, assuming that the recoil nucleus is free and that there are no Beta-Gamma correlations. The lifetimes were found to be (1.42 plus or minus 0.20)

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L 13624-63
ACCESSION NR: AP3003102

2

times 10 sup - 11 sec for the 0.890-MeV level of Ti-46 and (6.5 plus or minus 1.6) times 10 sup - 13 sec for the 1.114 MeV level of Cu-65. The latter corresponds to an excited-nucleus lifetime of 8.3 times 10 sup -13 sec for the M1 transition and to an E2/M1 intensity ratio equal to 0.32. "The authors wish to thank A. A. Islamov for assistance with the measurements." Orig. art. has: 7 formulas, 2 figures, and 2 tables.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Nuclear Physics Institute, Academy of Sciences, Kazakh SSR)

SUBMITTED: 09Jan63 DATE ACQ: 23Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 003 OTHER: 016

2/2
Card

BEGZHANOV, R.B.; KAIPOV, D.K.; SHUBNYY, Yu.K.; ISLAMOV, A.A.

Lifetime of the 1.29 Mev. level in Sn^{116}. Izv. AN Uz.SSR. Ser. fiz.-mat. nauk 7 no.5:45-50 '63. (MIRA 17:8)

1. Institut yadernoy fiziki AN UzSSR.

KAIPOV, D.K.; SHUBNYY, Yu.K.; KOSYAK, Yu.G.; REGZHANOV, R.B.

Resonance scattering of γ-rays from liquid and solid sources by Sn^{116} and Cu^{65} nuclei. Zhur. eksp. i teor. fiz. 45 no.3: 443-447 S '63. (MIRA 16:10)

1. Institut yadernoy fiziki AN Kazakhskoy SSR i Institut yadernoy fiziki AN Uzbekskoy SSR.
(Gamma rays—Scattering)

SHUBNYY, Yu.K.

Lifetime of the 0.570 Mev. level in the Te^{122} nucleus. Zhur. eskp. i teor. fiz. 45 no.3:460-463 S '63. (MIRA 16:10)

1. Institut yadernoy fiziki AN Kazakhskoy SSR.
(Tellurium isotopes) (Quantum theory)

ACCESSION NR: AP4042362 S/0056/64/047/001/0016/0020

AUTHORS: Shubny*y, Yu. K.; Kaipov, D. K.; Begzhanov, R. B.

TITLE: Resonance scattering of gamma quanta by the nuclei As-75, Sb-123, and Re-187

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964, 16-20

TOPIC TAGS: arsenic, antimony, rhenium, radioactive isotope, excited state, emission linewidth, gamma scattering, resonance scattering

ABSTRACT: The nuclear scattering method was used to determined the lifetimes of the excited states of As^{75}, Sb^{123}, and Re^{187} with energies 0.265, 0.161, and 0.686 MeV, respectively. The sources were the radioactive isotopes Ge^{75}, Sn^{123}, and W^{187}. The use of solid sources for some measurements made the time between collisions of the recoil nuclei with the surrounding atoms much shorter than the life-

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ACCESSION NR: AP4042362

time of the excited states, and the emission line shape was determined principally by the thermal motion of the radiating nuclei. The method of obtaining the radioactive isotopes is described together with the experimental setup. The values obtained for the lifetimes of As^{75}, Sb^{123} and Re^{187} where $(1.7 \pm 0.3) \times 10^{-11}$, $(8.9 \pm 3.0) \times 10^{-10}$, and $(4.1 \pm 2.0) \times 10^{-10}$, respectively, the latter value being about one order of magnitude larger than that calculated by the Nilsson model, but is close to the result obtained by Vartapetyan by the method of delayed coincidences (ZhETF v. 41, 1710, 1961). Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR); Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Institute of Nuclear Physics, Academy of Sciences, Uzbek SSR)

SUBMITTED: 21Dec63 ENCL: 01

SUB CODE: NP NR REF SOV: 002 OTHER: 007

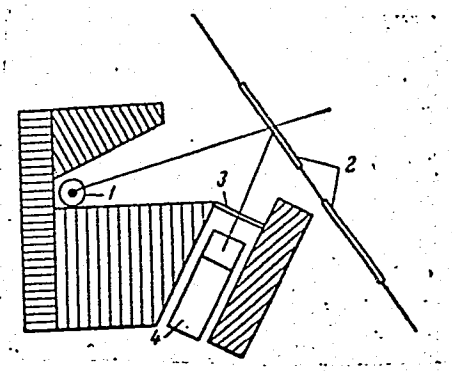
Card 2/3

ACCESSION NR: AP4042362

ENCLOSURE: 01

Diagram of experimental set-up:

1 - electric oven with source (Ge^{75} or W^{187})
2 - scatterers
3 - lead or copper absorber (Sn^{123})
4 - FEU-12B photomultiplier with NaI(Tl) crystal



Card 3/3

L 58444-65 EWT(m) Peb DIAAP

ACCESSION NR: AP5013878 UR/0056/65/048/005/1221/1223

AUTHOR: Kaipov, D. K.; Shubnyy, Yu. K.; Amerbayev, V. M.; Kazangapov, A.; Kosyak, Yu. G.

TITLE: Resonance scattering of Gamma quanta by Mg-24 nuclei

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 5, 1965, 1221-1223

TOPIC TAGS: Gamma scattering, resonance scattering, scattering cross section, level lifetime, energy distribution, magnesium nucleus

ABSTRACT: The authors studied the resonance scattering of 1.38-MeV γ quanta by Mg^{24} nuclei, using the radioactive isotope Na^{24}, with a half-life of 14 hours, in the form of an aqueous solution of NaOH. The average cross section for resonant scattering was found to be $3.7 \pm 0.6 \times 10^{-29}$ cm^2). The energy distribution of the emitted γ quanta was calculated by means of a model with continuous slowing down of the recoil nuclei as a result of elastic collisions with the surrounding atoms. The distribution was calculated for the cascade in which a β particle with end-point energy 1.39 MeV was emitted together with two γ quanta with energies 2.76 and

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L 58444-65
ACCESSION NR: AP5013878

2

1.38 MeV. The lifetime of the 1.38-MeV level in Mg^{24} was found to be (1.1 ± 0.2) x x 10^{-12} sec. This result is in satisfactory agreement with data by others. "The authors thank R. B. Begzhanov for making it possible to do the experiment in his laboratory." Orig. art. has: 1 figure and 2 formulas.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR)

SUBMITTED: 08May64 ENCL: 00 SUB CODE: NP

NR REF SOV: 003 OTHER: 004

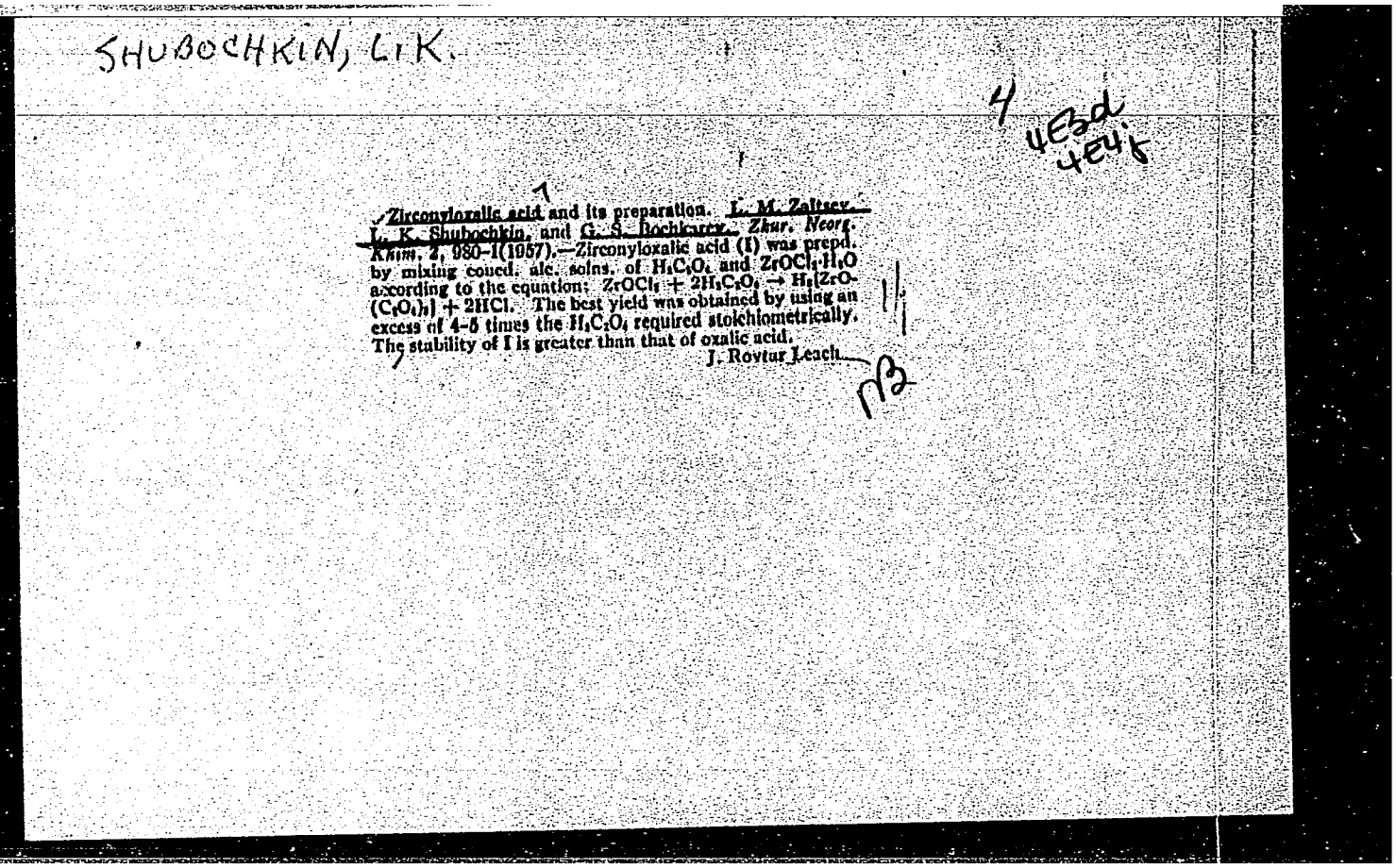
L 82

Card 2/2

SHUBOCHKIN, L. K.

ZAYTSEV, L.M.; SHUBOCHKIN, L.K.

"N.S.Kurnakov's pyrometer." G.G.TSurinov. Reviewed by L.M. Zaitsev, L.K. Shubochkin. Zhur.prikl.khim. 27 no.5:575-576 My '54. (MLRA 7:6)
(Pyrometrers and pyrometry) (TSurinov, G.G.)



SHUBOCHKIN, L.K.

4 4E5d 4E4k

Zirconyloxalic acid and its preparation. L. M. Zaitsev, L. K. Shubochkin, and G. S. Bochkarev. *Zhur. Neorg. Khim.* 2, 930–1(1957).—Zirconyloxalic acid (I) was prepd. by mixing concd. alc. solns. of $H_2C_2O_4$ and $ZrOCl_2 \cdot H_2O$ according to the equation: $ZrOCl_2 + 2H_2C_2O_4 \rightarrow H_2[ZrO(C_2O_4)_2] + 2HCl$. The best yield was obtained by using an excess of 4–5 times the $H_2C_2O_4$ required stoichiometrically. The stability of I is greater than that of oxalic acid.

J. Rovtar Leach

GOLOVNYA, V.A.; SHUBOCHKIN, L.K.

Acetofluoride pentacid-type complex compounds of uranyl. Zhur.-neorg.khim. 8 no.2:290-294 F '63. (MIRA 16:5)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova AN SSSR.

(Uranyl compounds)

GOLOVNYA, V.A.; SHUBOCHKIN, L.K.

Complex nature of uranyl acetates. Zhur.neorg.khim. 8 no.5:1116-1121 My '63. (MIRA 16:5)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR.

(Uranyl acetates)

KURNAKOVA, A.G.; SHUBOCHKIN, L.K.

Solubility of $Th(C_2O_4)_2 \cdot 6H_2O$ in aqueous solutions of HNO_3 and $H_2C_2O_4$ at 25°C. Zhur.neorg.khim. 8 no.5:1249-1254 My '63. (MIRA 16:5)

(Thorium oxalates) (Solubility)

L 13507-63 EWT(m)/BDS ESD-3 RM

ACCESSION NR: AP3003472 S/0078/63/008/007/1584/1593 56

AUTHOR,: Chernyayev, I. I.; Ellert, G. V.; Shubochkin, L. K.; Shchelokov, R. N.

TITLE: Uranyl sulfato-fluoride complex compounds. 1

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 7, 1963, 1584-1593

TOPIC TAGS: Uranyl, uranyl sulfate, uranyl fluoride, uranyl complex

ABSTRACT: Based on coordination theory, the new compounds which are shown in the enclosure were predicted and synthesized. They are a heretofore-unknown class of uranyl sulfato-fluoride complexes. Their properties, the electric conductivity and pH of aqueous solutions in particular, were analyzed. An aqueous solution of uranyl sulfate was potentiometrically titrated with potassium fluoride, and an aqueous solution of potassium sulfate was potentiometrically titrated with uranyl fluoride. Orig. art. has: 9 figures, 10 tables, 3 equations and 13 formulas.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova, Akademii nauk SSSR (Institute of general and inorganic chemistry, Academy of Sciences, SSSR).

Card 1/2

CHERNYAYEV, I.I.; ELLERT, G.V.; SHCHELOKOV, R.N.; SHUBOCHKIN, L.K.

Interaction of carbonato and fluoro groups in the inner sphere of uranyl complexes. Zhur. neorg. khim. 8 no.10:2232-2239 O '63. (MIRA 16:10)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR.

(Uranyl compounds) (Carbonates) (Fluorides)

SHUBOCHKIN, L.K.; ZAYTSEV, L.M.

Apparatus for the simultaneous recording of the curves of heating and of changes in weight of a specimen with the use of a single batch. Zav. lab. 29 no.10:1269-1271 '63. (MIRA 16:12)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN SSSR.

GOLOVNYA, V.A., doktor khim. nauk; ELLERT, G.V., kand. khim. nauk; SHUBOCHKIN, L.K., kand. khim. nauk; SHCHELOKOV. R.N., kand. khim. nauk; TSAPKINA, I.V., kand. khim. nauk; TRAGGEYM, Ye.N., kand. khim. nauk; MARKOV, V.P., doktor khim. nau, [deceased]; AL'TKHANOVA, Z.M.; DYATKINA, M.Ye., doktor khim. nauk; MIKHAYLOV, Yu.N.; TSAPKIN,V.V.,kand.khim.nauk; BOLOTOVA,G.T.,kand.khim.nauk; CHERNYAYEV,V.A.,doktor khim.nauk; KORCHEMNAYA,Ye.K., red.

[Complex compounds of uranium] Kompleksnye soedineniia urana. Moskva, Izd-vo "Nauka," 1964. 488 p. (MIRA 17:7)

1.Akademiya nauk SSSR. Institut obshchey i neorganicheskoy khimii. 2. Laboratoriya khimii kompleksnykh soyedineniy aktinidov Instituta obshchey i neorganicheskoy khimii AN SSSR (for all except Korchemnaya).

[illegible]

[illegible], E. F. --"The Study of the Speed of Reaction of Intra-spheric Conversion in Certain Platinum Compounds." (Publishing Department of the Acad Sci USSR), Acad Sci USSR, Inst of General and Inorganic Chemistry imeni N. S. Kurnakov, Moscow, 1956
(Dissertation for the degree of Candidate in Chemical Sciences.)

KNIZHNAYA LETOPIS
No. 41, October 1956

PA - 2875

AUTHOR: Not given

TITLE: Dissertations (July-December 1956) Department for Chemical Science. (Otdeleniie khimicheskikh nauk, Russian)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1957, Vol 27, Nr 4, pp 132-133 (U.S.S.R.)

Received: 5 / 1957 Reviewed: 7 / 1957

ABSTRACT: At the Institute for General and Nonorganic Chemistry the following dissertations were submitted for the purpose of obtaining the Academic degree of "Candidate of Chemical Science":

E.F.SHUBOCHKINA: "On the Velocity of Reactions of Innerspherical Exchange in Some Platinum Compounds".

At the Institute for Organic Chemistry:

N.M.NAZAROVA: "Catalytic alkalization of Paraffin and of Olefines at High Pressure".

V.M.SHULIN: "Research of Thermal Transformations of Tetramethylene and Tetrachlorethylene at High Pressure".

At the Institute for Physical Chemistry:

N.N.KAVTARADZE: "The Absorption of Hydrogen in Condenses Metal Layers".

Card 1/2

PA - 2875

Dissertations (July-December 1956) Department for Chemical Science.

At the Radium Institute:

The following dissertation was submitted for the purpose of obtaining the Academic degree of "Doctor of Physical and Mathematical Sciences":

W.F.LIVIN: "The Determination of the Quantum Characteristics of the Resulting Nuclei from the Reactions of the type (d,p) by the Analysis of the Products of the Reactions".

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress

Card 2/2

Sov. AC/Abstract No. 1

AUTHORS: Zvyagintsev, O. Ye., Shubochkina, Ye. F. 78-3-5-15/39

TITLE: A Study of the Kinetics of the Reactions of Substitution in Bivalent Platinum Compounds (Izucheniye kinetiki reaktsiy vnutrisfernogo zameshcheniya v soyedineniyakh dvukhvalentnoy platiny)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol 3, Nr 5. pp 1139-1149 (USSR)

ABSTRACT: The paper in question goes into the kinetics of substitution in the inner sphere of platinum II-compounds.
The effect of pyridine onmonamines of bivalent platinum was observed. The kinetics of the reaction of substitution in monamines of platinum II was investigated at temperatures of 2o,25,3o and 35°C. All the analysed reactions are of second grade. The constants of the velocity of reaction and the activity of energy were computed. From kinetic investigations it was found that the coordination NO_2-Pt-Cl was the most reactive and that the coordination Cl-Pt-Cl was the least. According to their activity in reaction, the coordinationscan be classified as follows:

Card 1/3

NO_2-Pt-Cl > NO_2-Pt-NO_2 > Br-Pt-Cl > Cl-Pt-Cl.

From research of the kinetics of compensation of groups in the inner sphere of complex compounds of platinum II, one is also able to estimate the displacement of the individual coordinative groups quantitatively. By means of the constant of velocity of the reaction of displacement, it was found that the bromine-ion in the inner sphere is 3 times more displaceable than that of chlorine. The NO_2-groups are endowed with a capacity of displacement which is 1c times that of chlorine and 4 times greater than that of bromine. The reactions of displacement of chlorine in the inner sphere were investigated with pyridine in the following platinum II-compounds:
$K[PtNH_3NO_2ClNO_2]$, $K[PtNH_3ClBrCl]$, $K[PtNH_3ClNO_2Cl]$, $K[PtNH_3Cl_3]$, $K[PtC_2H_4Cl_3]$ and the NO_2-group in $K[PtNH_3ClNO_2NO_2]$.
There are 1 figure and 14 references, 14 of which are Soviet.

A Study of the Kinetics of the Reactions of Substitution in Bivalent Platinum Compounds 78-3-5-15/39

SUBMITTED: June 1, 1957

AVAILABLE: Library of Congress

1. Platinum compounds--Substitution reactions 2. Pyridines --Substitution reactions

Card 3/3

ZVYAGINTSEV, O.Ye.; SHUBOCHKINA, Ye.F.

Study of the kinetics of internal sphere substitution in tetravalent platinum compounds. Zhur. neorg. khim. 3 no.5:1149-1161 My '58. (MIRA 11:6)

1.Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova Akademii nauk SSSR.
(Platinum organic compounds)
(Complex compounds)

AUTHORS: Zvyagintsev, O. Ye., Shubochkina, Ye. F. SOV/78-3-9-35/38

TITLE: An Investigation Into the Kinetics of Reaction of Complex Rhodium Compounds (Izucheniye kinetiki reaktsiy kompleksnykh soyedineniy rodiya)

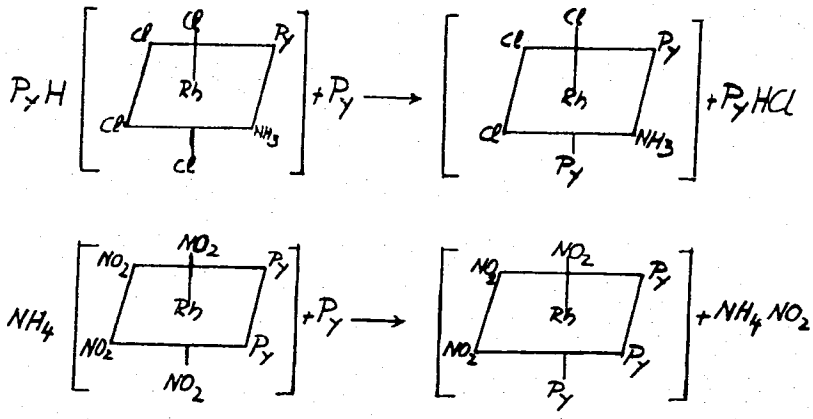
PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 9, pp 2214-2216 (USSR)

ABSTRACT: In order to explain the effect of trans-influence in rhodium complexes, the kinetics of the exchange reaction in rhodium compounds was examined. The reactions were carried out with the rhodium amines $PyH[RhCl_4NH_3Py]$ and $NH_4[Rh(NO_2)_4Py_2]$ with the reactive coordinates Cl-Rh-Cl and NO_2-Rh-NO_2.

In the interaction of rhodium amines with pyridine only an exchange of pyridine takes place by an acid group which is in a trans-position to the other. The result of these exchange reactions are compounds that correspond to the following equations:

Card 1/3

An Investigation Into the Kinetics of Reaction of Complex Rhodium Compounds



The values of K, E and lg Z were determined for the compound $PyH[RhCl_4NH_3Py]$. The kinetic characteristics are similar to those of platinum-(IV)-compounds.

Card 2/3

There are 1 table and 4 references, 4 of which are Soviet.

ZVYAGINTSEV, O.Ye.; SHUBOCHKINA, Ye.F.

Kinetics of interaction between tetravalent platinum tetramines and ammonia and ammonia and pyridine. Zhur.neorg.khim. 6 no.9: 2029-2037 S '61. (MIRA 14:9)
(Platinum compounds) (Ammonia) (Pyridine)

ZVYAGINTSEV, O.Ye.; SHUBOCHKINA, Ye.F.

Reaction kinetics of platinum (IV) nitrohalotetrammines with ammonia and pyridine. Zhur.neorg.khim. 8 no.3:590-596 Mr '63. (MIRA 16:4)
(Platinum compounds) (Ammonia) (Pyridine)

AVTOKRATOVA, T.D.; ANDRIANOVA, O.N.; BABAYEVA, A.V.; BELOVA, V.I.; GOLOVNYA, V.A.; DERBISHER, G.V.; MAYOROVA, A.G.; MURAVEYSKAYA, G.S.; NAZAROVA, L.A.; NOVOZHENYUK, Z.M.; ORLOVA, V.S.; USHAKOVA, N.I.; FEDOROV, I.A.; FILIMONOVA, V.N.; SHENDERETSKAYA, Ye.V.; SHUBOCHKINA, Ye.F.; KHANANOVA, E.Ya.; CHERNYAYEV, I.I., akademik, otv. red.

[Synthesis of complex compounds of platinum group metals; a handbook] Sintez kompleksnykh soedinenii metallov platinovoi gruppy; spravochnik. Moskva, Izd-vo "Nauka," 1964. 338 p. (MIRA 17:5)

1. Akademiya nauk SSSR. Institut obshchey i neorganicheskoy khimii. 2. Institut obshchey i neorganicheskoy khimii AN SSSR (for all except Chernyayev).

ZHUBOCHKINA, Ye.F.; [illegible]

Influence of inner-sphere ligands on the rate of substitution in the octahedral complexes of platinum. Zhur. neorg. khim. 9 no.8:1785-1792 Ag '64. (MIRA 17:11)

ZVYAGINTSEV, O.Ya.; SHUBOCHKINA, Ye.F.; PESHCHEVITSKIY, B.I.

Cis effect in complex platinum (IV) compounds. Zhur. neorg. khim. 10 no.5:1033-1037 My '65. (MIRA 18:6)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR i Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.

SHUBODEROV, A.Z.

Magnet-pendlum device for determining magnetic properties of bodies. Trudy Inst. mat. i mekh. AN Uz. SSR no.17:161-163 '56. (MLRA 10:4)
(Physical instruments) (Magnetism--Measurement)

YUMATOV, B.P.; SHUBODEROV, V.I., aspirant; FEDOROV, N.A., aspirant

Analysis of the practice of using skip hoists and the effectiveness of their introduction in the quarries of nonferrous metallurgy. Izv.vys.ucheb.zav.; geol.i razv. 8 no.11:128-134 N '65. (MIRA 18:12)

1. Moskovskiy geologorazvedochnyy institut imeni S.Ordzhonikidze.

YUMATOV, B.P., prof., doktor tekhn. nauk; SHUBODEROV, V.I., gornyy inzh.

Determining the optimum number of transfers of crushing and transloading stations in combined haulage. Gor. zhur. no. 12: 25-27 D '65. (MIRA 18:12)

1. Moskovskiy geologorazvedochnyy institut.

SHUBOV, B.I.

Discontinous hardening of carbon steels. Metalloved. i obr. met. no.3:55-57 Mr '57. (MLRA 10:4)

1. Institut inzhenerov morskogo flota.
(Steel-Hardening) (Steel--Metallography)

AUTHOR: Shubov, I.G. (Engineer). 110-7-7/30

TITLE: Investigation of the strength of commutators with swallow-tails. (Issledovaniye prochnosti kollektorov s lastochkinymi khvostami).

PERIODICAL: "Vestnik Elektropromyshlennosti" (Journal of the Electrical Industry, Vol.28, No.7, 1957, pp.22-26 (USSR).

ABSTRACT: Prolonged observations of the manufacture and operation of d.c. commutator machines showed that when commutators were dismantled local deformations were found in the conical parts of the V-ring and the swallow-tails of the commutator bars. It was, therefore, decided to verify experimentally the mechanical stresses in commutators.

It was difficult to make strain-gauge measurements on rotating commutators because of the difficulty of avoiding damage to the strain-gauges during dynamic forming of the commutator. Nevertheless, examination of deformation of commutator parts during static pressing and unpressing could be used to elucidate the generation of additional stresses in parts of commutators. In addition, it was necessary to derive stress calculation formulae. The next part of the article is concerned with derivation of formulae for

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different stresses in commutators, particularly the axial and radial stresses during pressing of the commutator onto the bush, for the stresses acting on the V-ring, for those in the swallow-tails (inner sides) of the commutator bars, for the shearing effect of the commutator bush and for the increase in the stresses in a commutator during rotation at working temperatures.

The article then describes strain-gauge measurements on the commutator of a large d.c. machine. The location of the strain-gauges is illustrated in Fig.4. Altogether twenty of them were installed but twelve were damaged during static pressing of the commutator. The stress distribution in the parts of the commutator during the process of static forming was determined at various stages of the operation. The test results are given in Table 1. Table 2 compares the results of tests (Table 1) and calculation by the formulae given in this article. Full details of the dimensions of the test commutator and stress calculations on it are given in an appendix. There are 4 figures, 2 tables and 2 Slavic references.

SHUBOV, I. G.

AUTHOR: Shubov, I. G., Engineer 105-58-4-6/37

TITLE: The Determination of the Magnetic Noise Level of D. C. Machines By Means of the Method of Electromechanical Analogies (Opredeleniye urovnya magnitnogo shuma mashin postoyannogo toka metodom elektromekhanicheskoy analogii)

PERIODICAL: Elektrichestvo, 1958, Nr 4, pp. 30-35 (USSR)

ABSTRACT: The magnetic noises produced by d. c. machines in many cases exceed those of non-magnetic origin. The calculation of the spatial form of oscillation of the support and the magnitude of the magnetic forces formed in the air gap of the machine are some of the basic problems in the calculation of magnetic noises. The author first investigates the spatial shape of the support oscillations. In the construction of d. c. machines it is especially important that f_e (frequency of exiting forces) and f_s (frequency of eigen oscillations of the system) do not coincide, as this leads to a great increase of vibration, i. e. to an oscillation resonance. The calculation of support oscillations in the case of resonance or in

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The Determination of the Magnetic Noise Level of D. C. Machines By Means of the Method of Electromechanical Analogies

the case of frequencies close to resonance the resistance of the fading of the oscillations in the support must be taken into account. Depending on the character of the exciting forces spatial support oscillation shapes can occur with a number of deformation waves at the circumference $\nu = 0$ and $\nu \geq 1$. For such cases the corresponding formulae for the radial yielding $\lambda_{support}$ are put down. Then the effect of the periodic magnetic forces dependent on armature slots is investigated. It is shown (by means of experiments) that for calculations in practice in most cases only those forces must be taken into account which cause oscillations with $\nu \geq 1$. The radial forces can be neglected when there is no oscillation resonance. Furthermore also the tangential forces which are always much smaller than the radial forces can be neglected.- Then the noise of the casing is investigated and the formula for the level of this noise with regard to the sound - pressure-level taken as zero-level $q_o = 2.10^{-4}$ is put down:

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$$\Gamma = 20 \lg \frac{q}{q_o} \left[db\right] .$$

In the last chapter the electromechanical analogy is dealt with. It is shown that as in the case of the mechanical system the friction r_R, the mass m and the yielding λ determine the motion of the system in the case of the electric circuit the resistance r_E, the inductivity L and the capacity C determine the current in the circuit. In the calculation of the magnetic noise produced by the electric machine the latter can be replaced by a continuous mechanical system and this again can be traced back to an equivalent electric circuit. When the parameters of the mechanical system and the frequency of the exciting forces ω are known the total resistance z_m of the mechanical system can be determined from the analogy with the electric circuit. The current i_2 and therefore also

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the oscillation velocity at the machine casing x_2 can be determined for the electric circuit. Also the level of the magnetic noise in the case of absolutely rigid fixing of the poles to the casing can be determined. The scheme becomes a simple circuit with in series connected elements r_1, L and C. Its calculation does not exhibit any more difficulties. An example is calculated through at the end. There are 7 figures, 5 tables, and 7 references, 5 of which are Soviet.

ASSOCIATION: Zavod "Elektrosila" im. S.M. Kirova ("Elektrosila" Works imeni S. M. Kirov)

SUBMITTED: May 7, 1957
AVAILABLE: Library of Congress

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1. Magnetic noise level-Theory 2. Engine mounts-Oscillation 3. Machines-Vibration

AUTHOR: Shubov, I.G. (Engineer) SOV/110-58-10-15/24

TITLE: Making allowance for the elasticity of packets of stampings in calculating the strength of the end-plates for stators and rotors of electrical machines (Uchet uprugosti paketov dinamnoy stali pri raschete prochnosti nazhimnykh plit statorov i rotorov elektricheskikh mashin)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, No.10. pp. 58-62 (USSR)

ABSTRACT: End-plates are used to apply the necessary compressive stress to the steel stampings of stators and rotors. In this work the stampings are considered as an elastic base on which is placed the end-plate, with a load concentrated at the tie-rod positions. If the end-plate bends, the steel may not be adequately compressed. The differential equation for bending a round plate uniformly loaded round the edge is given. In this article the solution derived for this equation is analogous to A.N. Krylov's solution for the problem of bending beams lying on an elastic base. The necessary modifications to the equations are then given and the solution is derived. Coefficients that are required in the course of the calculations are plotted in Figs.1 - 4. The solution of the differential equation that is given can be used to determine the deflection and angle of slope of the end-plate, the stress of the end-plate and also the reaction of the stampings when various boundary conditions obtain on the inner and

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Making allowance for the elasticity of packets of stampings in calculating the strength of the end-plates for stators and rotors of electrical machines.

outer edges of the plate. The common methods of fixing the stampings in electrical machines are stated in Table.1. and the corresponding boundary conditions are given in Table.2. A common case of fixing stator steel is then considered in more detail. Sometimes the end-plates are not simple flat sheets but are of more complicated shape, such as the two shown in Fig.5. The calculations are then very complicated, and for practical purposes use may be made of formulae derived by considering the end-plate as a ring subjected to a twisting moment distributed over the perimeter. The elastic ractions of stampings were determined experimentally on the armature stampings, 840 mm diameter of a large d.c. motor. The sheets were pressed and measurements taken with three indicators to determine the degree of compression. When the pressure was removed, the indicators showed the amount of recovery. Test results obtained whilst pressing a packet 500 mm thick are given in Fig.6. It will be seen that on a second pressing the steel settles down more than on the first. The

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coefficient of elastic recovery was 20 kg/cm^2. Similar characteristics were obtained for packets of different heights. The effect of the length of the packet is shown graphically in Fig.7. There are 7 figures, 2 tables, 2 literature references (Soviet).

SUBMITTED: July 31, 1957.

1. Steel plates--Deformation 2. Steel plates--Mathematical analysis
3. Electric motors--Production

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SOV/110-59-2-1/21

AUTHORS: Ivanov, N.P., Pankratov, B.Ya., Rabinovich, I.N., and Shubov, I.G., Engineers

TITLE: Water-cooled Direct Current Machines (Mashiny postoyannogo toka s vodyanym okhlazhdeniyem)

PERIODICAL: Vestnik Elektropromyshlennosti, 1959, Nr 2, pp 1-4 (USSR)

ABSTRACT: The disadvantages of normal methods of cooling rotating machines are briefly described. Graphs showing the reduction in output for a given frame size for totally enclosed as compared with protected machines are given in Fig 1. The increase in overall machine size that results from the use of air coolers is illustrated by the outline drawings of Fig 2. Because of the great need for a small totally enclosed machine the authors have developed the design and manufacture of an enclosed machine with internal water cooling, a general view of which is given in Fig 3, whilst the armature and stator are shown separately in Fig 4. The machine is cooled by special elements in the form of brass discs to which brass tubes are brazed (see Fig 5A). These plates, which are 10 mm thick, are assembled in the armature steel.

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The ends of the tubes are all connected to the central [illegible] of the shaft, and at the free end of the shaft there

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cooling facilities available and later designs are improved in this respect; there will be more coolers in the stator, the field windings will be made of hollow conductors and a pump will be built into the machine to make it more independent. The construction is particularly advantageous for machines with a wide range of operating speeds which normally require external fans. The main disadvantage of water cooled machines is that they need fresh water.

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There are 5 figures and 1 table.

SUBMITTED: June 20, 1958

L 18532-66 EWT(1)

ACC NR: AP6002683 SOURCE CODE: UR/0292/66/000/001/0010/0013

AUTHOR: Rabinovich, I. N. (Engineer); Shubov, I. G. (Candidate of technical sciences) 10 B

ORG: none

TITLE: Design of synchronous machines with claw-shaped rotors 29

SOURCE: Elektrotekhnika, no. 1, 1966, 10-13

TOPIC TAGS: synchronous machine, electric generator unit

ABSTRACT: Some hints are given for designing high-speed higher-frequency unwound-rotor synchronous generators intended for autonomous plants; they may have a capacity up to 1000 kw or more. The advantages and disadvantages of single- and multipacket stator construction are discussed. Water-cooled stators and air-cooled rotors are recommended for higher-capacity machines. Criteria for

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maximum parameters of the single-packet construction (flux density, stator loading) are formulated; also, recommendations are given for the spacing between packets in multipacket construction and for limiting the bearing currents. In addition to its primary function, the synchronous generator with a claw-shaped rotor can also develop a considerable amount of d-c low-voltage power; extraction of this power, however, requires overcoming some slip-contact design difficulties. Orig. art. has: 7 figures and 18 formulas.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 002 / UDC: 621.313.32.001.24

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NIKOLAYEVSKIY, Ye.Ya., inzh.; EYDEL'NANT, L.B., inzh.; DAVYDOV, A.M., inzh.; SIMACHEV, L.V., red.; BATENCHUK, A.N., inzh., red.; IPATOV, P.P., inzh., red.; KRYLOV, V.A., inzh., red.; PELESHUK, M.I., inzh., red.; PITERSKOV, N.I., red.; SHUBOV, L.B., red.

[Instructions for industrial safety measures in the assembly of technological equipment and piping] Instruktivnye ukazaniia po tekhnike bezopasnosti pri montazhe tekhnologicheskogo oborudovaniia i truboprovodov. Izd.2., perer. i dop. Moskva, TSentr. biuro tekhn.informatsii, 1959. 160 p. (MIRA 13:6)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Glavmetallurgmontazh. 2. Glavnyy inzhener Glavmetallurgmontazha Ministerstva stroitel'stva RSFSR (for Simachev).
(Industrial safety)